Attachment #1

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UNITED STATES INFORMATION AGENCY

WASHINGTON

August 3, 1962

MEMORANDUM FOR: Brig. General Edward G. Lansdale

SUBJECT: The Technical Feasibility of Medium Wave Broadcasting to Cuba.

The problem presented is how best to provide a medium wave radio signal throughout the island of Cuba. For purposes of this study it is assumed that the transmitter will be located outside the continental United States, and it is assumed that the transmitter will have a power of a thousand kilowatts and will use a directional antenna. And it is further assumed that the North American Regional Broadcasting agreement (NARBA), to which the United States ia a signatory nation, will be abrogated.

If it is assumed that a clear channel can be provided by the FCC and if it is assumed that the Cuban government would not attempt to interfere with the transmissions, satisfactory service could be provided from a number of Caribbean sites. If you were primarily interested in daytime coverage, Jamaica, Grand Cayman or Andros Island in the Bahamas would be best. However, if both day and night were considered, and varying factors were weighted, the sites would be ranked as follows: Nassau 61, Dominican Republic 59, Jamaica-Cayman Island 55, Navassa Island 50, Nicaragua-Honduras 49, Swan Island 48, British Honduras 44, Grand Abaco-Grand Bahama Island 43, Puerto Rico 42, Venezuela 37.

If the FCC did not provide a clear channel, nighttime coverage would be drastically reduced. In order to provide such a channel, the government would undoubtedly have to purchase an existing clear channel station since its value would be ruined by our extended use of its frequency. It should also be borne in mind that our transmitting power of a thousand kilowatts would undoubtedly severely interfere with U.S. and Caribbean stations on adjacent channels and would undoubtedly result in many complaints from Caribbean countries.

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Even more serious, however, is the ease with which the Cuban government could negate the whole effort by placing some of their transmitters on whatever frequency we select. The shaded area on the map shows what the Cuban government could do merely by utilizing existing transmitters which are now surplus to their needs. These transmitters are surplus because they were built when there was private competitive broadcasting and most cities and towns had more than one transmitter. Now that there is only one program, many transmitters are no longer required. If Castro was sufficiently concerned to put most of his transmitters on our frequency, we would have virtually no listenership. It probably would not interfere too greatly with his own coverage, particularly in the cities.

While a thousand kilowatt medium wave transmitter is now in storage, the power plant would have to be procured or diverted from Liberia. It is estimated that it would take about fifteen months and cost about eight million dollars to install a transmitter of this power as rapidly as possible. This does not take into account whatever time would be required to obtain the political permission and to locate a physical site.

In contrast to medium wave coverage, short wave coverage is much more difficult to jam because you can operate on so many more frequencies simultaneously, and Castro's existing capabilities in the short wave field are limited. It is easy to provide a strong short wave signal from the U.S. or anywhere in the Caribbean. The new VOA station in North Carolina, which will commence broadcasting in December 1962, will provide an even stronger signal than our current excellent one. The number of short wave receivers in Cuba is unknown, although we do know that more than half of the defectors questioned at Opa Locka state that they have listened to short wave radio. It is interesting to note that a Latvian Electrical Company has announced that it has filled the first part of a large order of tropicalized receivers for Cuba capable of reception on both medium wave and short wave.

Attached is a paper outlining the technical factors considered in comparing ten different potential locations. The technical factors considered are:

(1) Program feed from the U.S. (relative ease or difficulty in providing live program material to the transmitter from U.S. sources.)

(2) Skywave (nighttime) signal coverage of Cuba. (Signal coverage calculations are based on FCC skywave curves, increased by a factor of 4 db to take into account geomagnetic conditions in the Caribbean area.)

(3) Groundwave signal coverage of Cuba. (Signal coverage based on FCC curves.)

(4) Fading zone effects in Cuba (potential distortion and severe fading as a result of interaction of skywave and groundwave signals during the nighttime hours.)

Interference to or from radio stations in the U.S. or other adjacent countries, has not been considered since the assumption is made that the proposed station will operate on a clear channel.

The locations chosen for comparison are as follows (where several locations are lumped together, the technical suitability, propagation-wise, is considered to be essentially the same for each location):

(1) Grand Abaco Island, Grand Bahama Island, and other nearby islands in Bahamas.

(2) Nassau.

(3) Navassa Island.

(4) Puerto Rico.

(5) Dominican Republic.

(6) Swan Island.

(7) British Honduras.

(8) Nicaragua/Honduras (on the sea coast near border of the two countries.)

(9) Cayman Island.

(10) Venezuela.

The attached chart shows the relative comparison between the various locations, considering the various technical factors as aforementioned.

(signed)

Donald M. Wilson
Deputy Director

Attachments

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		Weighing Factor	Nassau	Dominican Republic	Cayman Island - Jamaica	Navassa Island	Nicaragua/ Honduras	Swan Island	British Honduras	Gr. Abaco/ Brand Bahama Island	Puerto Rico	Venezuela
1.	Program feed from U.S.	5	5	4	4	4	4	4	4	3	5	4
2.	Skywave, nighttime signal in Cuba	10	4	4	5	5	3	4	3	4	2	2
3.	Fading zone effects in Cuba	-8	3	2	5	5	2	4	2	4	1	1
4.	Groundwave, daytime signal in Cuba	5	4	3	5	4	3	4	2	4	1	1
	Total		61	59	55	50	49	48	44	43	42	37

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